Before the Federal Communications Commission Washington, D.C. 20554

In the Matter of Application of)	
THE BOARD OF TRUSTEES OF NORTHERN MICHIGAN UNIVERSITY))	File Nos. 0008274506 and 0008274507
For New Educational Broadband Service Stations)	

MEMORANDUM OPINION AND ORDER

Adopted: July 22, 2019 Released: July 22, 2019

By the Chief, Wireless Telecommunications Bureau:

I. INTRODUCTION

1. Subject to certain conditions, this *Memorandum Opinion and Order* grants to the Board of Trustees of Northern Michigan University (NMU or Northern Michigan University) waivers of the filing freeze on new Educational Broadband Service (EBS) applications and a waiver of Section 1.1913(b) of the Commission's rules to permit manual filing of its applications.

II. BACKGROUND

- 2. 2500-2690 MHz Band Generally. In developing regulatory policies in the 2500-2690 MHz band over the last several decades, the Commission has been cognizant of this band's potential to host a variety of services. In 1963, the Commission, in establishing the Instructional Television Fixed Service (ITFS) in the 2500-2690 MHz band,¹ envisioned that it would be used for transmission of instructional material to accredited public and private schools, colleges and universities for the formal education of students.² In 1983, in response to the demand for additional spectrum for delivery of video entertainment programming to subscribers, the Commission re-allotted eight ITFS channels (the E and F channel blocks) and associated response channels for use by the Multipoint Distribution Service (MDS).³ In conjunction with this re-allotment, the FCC permitted ITFS licensees to lease "excess capacity" on their facilities to commercial entities.⁴
- 3. In April 2003, the Commission proposed new technical rules and a new band plan for ITFS and MDS spectrum (and changed the service names to EBS and Broadband Radio Service (BRS),

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¹ See Amendment of Parts 2 and 4 of the Commission's Rules and Regulations to Establish a New Class of Educational Television Service, Report and Order, 39 FCC 846 (1963), recon. denied, 39 FCC 873 (1964) (ETV Decision).

² See Amendment of the Commission's Rules with Regard to the Instructional Television Fixed Service, the Multipoint Distribution Service, and the Private Operational Fixed Microwave Service; and Applications for an Experimental Station and Establishment of Multi-Channel Systems, Report and Order, 48 Fed. Reg. 33873, 33875, para. 9 (1983) (1983 R&O) (citing ETV Decision, 39 FCC at 852-53 para. 25).

³ See Amendment of Parts 2, 21,74 and 94 of the Commission's Rules and Regulations in Regard to Frequency Allocation to the Instructional Television Fixed Service, the Multipoint Distribution Service, and the Private Operational Fixed Microwave Service, Report and Order, 94 FCC 2d 1203 (1983) (First Leasing Decision).

⁴ *Id.* at 1206-07 para. 4.

respectively). It also imposed a freeze on all applications for new BRS and EBS licenses.⁵ Subsequently, the Commission lifted the freeze on applications for new BRS licenses, but maintained it for applications for new EBS licenses.⁶ In June 2004, the Commission adopted new rules fundamentally restructuring the 2500-2690 MHz band, but left the EBS filing freeze in place.⁷ In 2008, the Commission sought comment on how to license unassigned EBS spectrum.⁸

- 4. On July 11, 2019, the Commission released a *Report and Order* that transformed the regulatory framework governing the 2.5 GHz band (2496-2690 MHz) by taking the following actions.⁹ The Commission eliminated the EBS eligibility requirements (including for licenses granted via waiver of the filing freeze), the educational use requirements for EBS licenses, and the restrictions on EBS leases entered into under the Commission's Secondary Markets policies on a going forward basis.¹⁰ The Commission adopted a Tribal priority window for Tribal entities to obtain EBS licenses on Tribal lands that are located in rural areas.¹¹ In addition, the Commission decided to offer remaining EBS spectrum available for flexible use in three overlay (county-based) licenses, subject to competitive bidding in those markets where white spaces (*i.e.*, spectrum that is not associated with an active license) exist.¹²
- 5. Northern Michigan University Applications. NMU, an accredited university located in Marquette, Michigan that serves approximately 9,000 students with over 1,100 faculty and staff, first became an EBS licensee in 2007. NMU has used EBS licenses to construct its own broadband network (the Educational Access Network, or EAN) that covers a significant portion of the 12,764 square miles of rugged terrain in the rural Upper Peninsula of Michigan.¹³ NMU issues a university-supplied notebook computer to each fulltime student and now has more than 9,000 devices capable of using this network. ¹⁴ In addition to university students, the network is also used to provide independent broadband service to nearly 2,000 K-12 students and life-long learning students throughout the Upper Peninsula service areas—extending learning opportunities to students of all ages, at school and at home.¹⁵

⁵ See Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands, Notice of Proposed Rulemaking and Memorandum Opinion and Order, 18 FCC Rcd 6722 (2003) (NPRM and MO&O).

⁶ See Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands, Second Memorandum Opinion and Order, 18 FCC Rcd 16848 para. 1, 16853, para. 13 (2003) (Second MO&O).

⁷ Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands, Report and Order and Further Notice of Proposed Rulemaking, WT Docket No. 03-66, 19 FCC Rcd 14165 (2004) (BRS/EBS R&O and FNPRM).

⁸ Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands, Third Order on Reconsideration and Sixth Memorandum Opinion and Order and Fourth Memorandum Opinion and Order and Second Further Notice of Proposed Rulemaking and Declaratory Ruling, WT Docket No. 03-66, 23 FCC Rcd 5992, 6060-6068 paras. 180-204 (2008) (Second FNPRM).

⁹ Transforming the 2.5 GHz Band, WT Docket No. 18-120, Report and Order, FCC 19-62, at para. 3 (July 10, 2019) (2.5 GHz R&O).

¹⁰ *Id.* at para.14.

¹¹ *Id.* at, para. 47.

¹² *Id.* at, paras. 77 and 93.

¹³ File Nos. 0008274506 and 0008274507, Exhibit B: Waiver Request at 2 (filed July 6, 2018) (2018 Waiver Request). A map showing claimed coverage of NMU's network is available on NMU's website at https://www.nmu.edu/ean/#coverage.

- Since 2008, the Wireless Telecommunications Bureau ("Bureau") has granted NMU four waivers of the filing freeze on new EBS applications. The Bureau's first action granted NMU a new authorization to operate on four EBS channels—A4, B4, C4, and D4, a total of 24 megahertz of spectrum—in Marquette, Michigan where NMU is located.¹⁶ The Bureau found that NMU's situation presented unique circumstances; i.e., there was no EBS license that covered Marquette, Michigan, and NMU proposed to use the spectrum solely to meet its educational needs and the needs of the surrounding community.¹⁷ The Bureau also concluded that a waiver grant would be consistent with Commission precedent.¹⁸ The Bureau placed three conditions on the grant of the freeze waiver, based on commitments made by NMU. First, the Bureau adopted as a license condition NMU's commitment not to lease its spectrum.¹⁹ Second, the Bureau held, consistent with NMU's request, that NMU's GSA shall not include any area within the GSA of any previously licensed co-channel EBS station.²⁰ Third, although the discrete operations proposed in NMU's 2007 Application were not within the Canadian coordination zone, to the extent that NMU subsequently wished to expand operations into the portion of its GSA that is within the coordination zone, the Bureau required NMU to comply with the coordination requirements of the relevant agreement between the United States and Canada.²¹ The Bureau also waived the electronic filing requirement because the Universal Licensing System (ULS) was not configured to accept applications for new EBS stations.²²
- 7. In 2013, the Bureau granted two more waivers to permit NMU to add channels to its Marquette, Michigan GSA, including channels A1-A3, B1-B3, C1-C3, D1-D3, G1-G3, and G4.²³ As a result of these actions, NMU was authorized to operate on all of the EBS channels in Marquette, Michigan. In 2016, the Bureau granted another waiver to allow NMU to hold new EBS licenses on and near the reservation of the Bad River Band of the Lake Superior Tribe of Chippewa Indians in Northeastern Wisconsin and for various areas covering the Upper Peninsula in Michigan.²⁴ These authorizations enabled NMU to construct and operate an LTE network in six areas that have a demonstrated lack of available educational broadband service,²⁵ are generally rural and remote, and have

¹⁵ 2018 Waiver Request at 2.

¹⁶ Application of The Board of Trustees of Northern Michigan University For a New Educational Broadband Service Station, Memorandum Opinion and Order, 23 FCC Rcd 11832 (WTB 2008) (2008 Waiver Order). See also, File No. 0003250992 (filed Dec. 7, 2007) (2007 Application).

¹⁷ *Id.* at 11836, paras. 10-11.

¹⁸ Id. at 11836, para. 12 (citing Gateway Telecom LLC d/b/a StratusWave Communications; Applications For New Educational Broadband Service Stations on the A and B Group Channels in Centerville, Ohio; and the A and B Group Channels in Arden, West Virginia, Memorandum Opinion and Order, 22 FCC Rcd 15789 (2007)).

¹⁹ 2008 Waiver Order, 23 FCC Rcd at 11837, para. 13.

²⁰ *Id.* at 11837, para. 14.

²¹ *Id.* (citing Interim Arrangement Concerning the Use of the Frequency Bands 2150 – 2162 MHz and 2500 – 2690 MHz by MCS and MDS Stations Near the Canada/United States of America Border (Dec. 5, 1997) (Interim Arrangement)).

²² 2008 Waiver Order, 23 FCC Rcd at 11837-38 para. 15.

²³ The Board of Trustees of Northern Michigan University, Memorandum Opinion and Order, 28 FCC Rcd 15576 (WTB BD 2013) (2013 Waiver Order 1); The Board of Trustees of Northern Michigan University, Memorandum Opinion and Order, 28 FCC Rcd 15583 (WTB BD 2013) (2013 Waiver Order 2).

²⁴ The Board of Trustees of Northern Michigan University, Memorandum Opinion and Order, 31 FCC Rcd 3371 (WTB BD 2016) (2016 Waiver Order).

²⁵ File Nos. 0007030772-000703077, Exhibit B: Waiver Request at 8, 9, 10, 11, 12 and 13 (filed Nov. 13, 2015).

lower than average college graduation rates and income levels.²⁶ NMU has met the buildout requirements for all of the EBS licenses that it has been granted since 2008.²⁷

- 8. NMU now seeks to extend its EAN to support its own distance learning activities and to provide broadband access to other K-12 school and community college students in areas of Michigan's northern Lower Peninsula.²⁸ Therefore, on July 6, 2018, NMU filed waiver requests and associated applications to operate on EBS channels in portions of Michigan's Lower Peninsula.²⁹ NMU has filed applications for two proposed service areas: one centered near Onaway, Michigan and the other centered near Curtis, Michigan.³⁰ According to a map prepared by Connect Michigan, large portions of the proposed service areas lack access to broadband with speeds in excess of 10 Mbps.³¹ Both service areas have average incomes and college graduation rates well below the state average.³²
- 9. NMU proposes to use EBS spectrum within the Onaway GSA in the channel groups B1-B4, D1-D4, G1-G4 to activate an LTE network.³³ NMU is confident that the requested 12 channels would allow it sufficient bandwidth to operate TDD LTE service within this GSA.³⁴ NMU indicates that service within the Onaway GSA will be provided in cooperation with Cheboygan-Otsego-Presque Isle Education District (COPESD).³⁵ COPESD serves 23 schools and approximately 9000 students in the counties of Cheboygan, Otsego, and Presque Isle, roughly 2100 square miles in area.³⁶ In addition, COPESD collaborates with many other independent school districts through the delivery of specialized educational programs in math, science, and early childhood development.³⁷
- 10. NMU indicates that service in the Curtis GSA, will be provided in cooperation with the Alpena-Mountmorency-Alcona Service District (AMASD).³⁸ AMASD provides support services to Alcona Community Schools, Alpena Public Schools, Atlanta Community Schools, and Hillman Community Schools through delivery of specialized educational programs in math, science, and early childhood development.³⁹ NMU proposes to use EBS spectrum within this GSA in the channel groups A1-A4, B1-B4, C1-C4, D1-D4, and G1-G4 to activate an LTE network.⁴⁰ Engineering studies for this proposed GSA show that four incumbent licenses are currently authorized to use EBS spectrum in a very small overlapping portion of the proposed Curtis GSA, licensed as Stations WNC439 (channels A1-A4).

²⁶ *Id.* at 6, 8, 9, 10, 11-12 and 13.

 $^{^{27}}$ See File Nos. 0004924659, 0008168121, 0008182602, 0008189146, 0008189211, 0008189220 (accepted Nov. 8, 2011, May 10, 2019).

²⁸ 2018 Waiver Request at 6.

²⁹ File Nos. 0008274506 and 0008274507.

³⁰ 2018 Waiver Request at 9.

³¹ 2018 Waiver Request at 6 and Attachment 1.

³² 2018 Waiver Request at 10, 12.

³³ *Id*. at 10.

³⁴ *Id*. at 11.

³⁵ *Id.* at 10.

³⁶ *Id*. at 10.

³⁷ *Id.* at 10. While COPESD holds licenses for other EBS channel groups (Stations WHR997, WLX374, and WNC702), those licenses are subject to a long-term lease and are therefore unavailable for an independent network. 2018 Waiver Request at 11.

³⁸ 2018 Waiver Request at 11.

³⁹ *Id.* at 11-12.

⁴⁰ *Id*. at 12.

WNC438 (channels C1-C4), WNC400 (channels D1-D4), and WNC442 (channels B1-B4).⁴¹ NMU recognizes that it would be unable to use its assigned channels within the overlap area, which is confined to a small space over Lake Huron, and pledges not to interfere with any existing or future incumbent operations.⁴²

11. With its Applications, NMU provided letters of support from the Honorable Gretchen Whitmer, Governor of the State of Michigan; ⁴³ the Honorable Rick Snyder, former Governor of the State of Michigan; Jamie R. Huber, Superintendent of the Cheboygan Otsego Presque Isle Educational Service District; and Scott Reynolds, Superintendent of the Alpena-Montmorency-Alcona Educational Service District. ⁴⁴ NMU's Applications were listed on public notice as accepted for filing on May 29, 2019. ⁴⁵ No petitions to deny or other oppositions were filed.

III. DISCUSSION

- 12. As noted, NMU seeks both a waiver of the filing freeze on new EBS applications and a waiver of the electronic filing requirement contained in Section 1.913(b) of the Commission's rules for such applications, to permit it to use available EBS channels to operate a LTE network for the provision of educational and instructional material.⁴⁶ The Commission may grant a request for a waiver if it is shown that: (i) the underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest; or (ii) in view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative.⁴⁷ As discussed below, we conclude that NMU has met the second prong of the waiver standard with respect to both of its requests, and accordingly we grant its Waiver Request, subject to the conditions outlined below.
- 13. We conclude that application of the filing freeze would be inequitable and contrary to the public interest under the unique circumstances presented by NMU. NMU is unique among EBS licensees—while most EBS licensees have not built their own facilities and have leased their spectrum to commercial providers, NMU has built and operates its own LTE broadband network that covers a significant portion of the rugged, underserved territory in Michigan's Upper Peninsula. The network is used extensively by NMU's students and faculty, students of partner institutions, and other members of the community. NMU also has a history of partnering with other educational institutions and other local partners: in building its network in the Upper Peninsula, NMU partnered with other colleges and K-12 school districts. Michigan's former Governor has recognized NMU's role in enhancing broadband in

⁴¹ 2018 Waiver Request at 13.

⁴² *Id*. at 13.

⁴³ See Letter from Gretchen Whitmer, Governor, State of Michigan, to Ajit Pai, Chairman, FCC (filed July 17, 2019).

⁴⁴ 2018 Waiver Request, Attachments 2, 4, 6, 7.

⁴⁵ See Wireless Telecommunications Bureau Market-Based Applications Accepted for Filing, Report No. 14091, Public Notice, (rel. May 29, 2019) at 18.

⁴⁶ 2018 Waiver Request at 1.

⁴⁷ 47 C.F.R. § 1.925(b)(3).

⁴⁸ Based on a review of the Universal Licensing System conducted on May 12, 2019, there are 2,087 active leases of EBS spectrum, compared with 2,193 EBS licenses.

⁴⁹ 2018 Waiver Request at 6-13. These partners include the Bad River Band of the Lake Superior Tribe of Chippewa Indians; the non-profit Merit Network; Gogebic Community College; Bay Community College; the Delta and Schoolcraft local school districts; the Marquette Alger Regional Educational Service Agency; and Bay Mills Community College.

underserved areas and supports the Waiver Request.⁵⁰ NMU now wishes to replicate the network it operates in the Upper Peninsula of Michigan in portions of the Lower Peninsula, again in partnership with local educational institutions. As with NMU's earlier waiver requests, the areas for which NMU now seeks licenses have limited broadband access and face economic challenges.⁵¹ Given all these factors, we find that NMU has shown unique factual circumstances that would make it inequitable to deny its waiver request.

- 14. NMU envisions extending its EAN in areas of Michigan's northern Lower Peninsula to support its own distance learning activities and to provide broadband access to other K-12 school and community college students through the proposed service areas.⁵² NMU has successfully used cooperative agreements with local educational institutions throughout its Upper Peninsula license areas because using shared facilities is an efficient way of sustaining costly LTE technology and infrastructure.⁵³ NMU reports that it is prepared to assume a new level of responsibility and accountability in wireless broadband construction and management, and it is now working with communities and educational entities in the northern Lower Peninsula to ensure that the network will be used to support the needs of local students and the communities in which they live.⁵⁴ Construction of the network will be paid for by NMU, the State of Michigan, and charges to individual users.⁵⁵ As it has done with previous network builds, NMU intends to develop this construction project in such a way that network services can be traded for space on existing city infrastructure such as building rooftops, water towers, and other community high-rise assets that are suitable for LTE antennas and transmitters.⁵⁶
- 15. We also find that NMU has no reasonable alternative to its waiver request. NMU cannot obtain EBS spectrum in this area from other private sources, either because the spectrum is not licensed or because it is tied up in leases. NMU cannot attempt to acquire or lease spectrum from another EBS licensee. It therefore has no alternative to asking the Commission for new licenses.
- 16. To ensure that grant of the requested waivers will produce the public interest benefits we anticipate, we will place three conditions on the waiver grant, all of which are consistent with conditions imposed on prior grants of waivers of the EBS filing freeze.⁵⁷ First, NMU's licenses shall include a condition that its Geographic Service Areas (GSAs) shall not include any area within the GSA of any previously licensed co-channel EBS station.⁵⁸ Second, to ensure that the licensed spectrum is quickly put to use to serve a community that lacks broadband alternatives, we require NMU to provide substantial

⁵⁰ 2018 Waiver Request, Attachment 2.

⁵¹ 2008 Waiver Order, 23 FCC Rcd at 11836, para. 10; 2013 Waiver Order 1, 28 FCC Rcd at 15580, para. 11; 2013 Waiver Order 2, 28 FCC Rcd at 15587, para. 12.

^{52 2018} Waiver Request at 6.

⁵³ *Id.* at 6-7.

⁵⁴ *Id*. at 8.

⁵⁵ *Id.* at 8-9.

⁵⁶ *Id*. at 9.

⁵⁷ See 2008 Waiver Order; The Nisqually Indian Tribe, Memorandum Opinion and Order, 28 FCC Rcd 15569 (WTB BD 2013); 2013 Waiver Order 1; 2013 Waiver Order 2; 2016 Waiver Order.

⁵⁸ As indicated in the Waiver Request, NMU has not requested authorization for any EBS spectrum already authorized to another entity and has agreed to obtain consent and cooperate with previously existing licensees to the extent necessary. Thus, with respect to Application File No. 0008274506, NMU has not requested authorization for any overlap area already included in the license for EBS Stations WHR997, WLX374 and WNC702. 2018 Waiver Request at 11. With respect to File No. 0008274507, NMU has not requested authorization for the overlap area already included in the license for EBS Stations WNC439, WNC438, WNC400, and WNC442. 2018 Waiver Request at 13.

service pursuant to Section 27.14(o) of the Commission's Rules within two years from the date that the license is granted by the Bureau.⁵⁹ Third, to the extent that the discrete operations proposed in NMU's Applications are within the Canadian coordination zone, it must comply with the coordination requirements of the relevant agreement between the United States and Canada.⁶⁰ Specifically, prior to operating within 120 kilometers of the Canadian border or between 120 160 kilometers of the Canadian border where there its signal causes a power flux density (PFD) at ground level anywhere in Canada that exceeds -116 dBw/m² in any 1 MHz, NMU must either file an application for an individual transmitter authorization with the Commission, which will be coordinated with Canada,⁶¹ or coordinate directly with affected licensees across the border, as permitted under the agreement with Canada.

17. With respect to the electronic filing requirement contained in Section 1.1913(b) of the Commission's Rules,⁶² we observe that the Commission's electronic ULS is not currently configured to accept applications such as the one submitted by NMU. We therefore conclude that, in light of these circumstances, application of the rule would be inequitable and contrary to the public interest because it would be unfair to reject an application for failure to file electronically when electronic filing capability is not available. We therefore grant NMU a waiver to permit manual filing of its Applications.

IV. CONCLUSION AND ORDERING CLAUSES

- 18. For the reasons discussed above, we grant NMU's requests for waiver of: (1) the filing freeze that was imposed by the Commission on new EBS applications in the Commission's April 2003, *NPRM and MO&O*, and (2) the electronic filing requirement in Section 1.1913(b) of the Commission's Rules. We also direct the Broadband Division to process NMU's applications in accordance with the requirements set forth in this *Memorandum Opinion and Order* and the Commission's rules.
- 19. Accordingly, IT IS ORDERED, pursuant to Section 4(i) of the Communications Act of 1934, as amended 47 U.S.C. § 154(i), and Section 1.925(b)(3) of the Commission's Rules, 47 C.F.R. § 1.925(b)(3), that the waiver requests filed by Northern Michigan University on July 6, 2018 in connection with File Nos. 0008274506 and 0008274507 ARE GRANTED, subject to the conditions noted below.
- 20. IT IS FURTHER ORDERED, pursuant to Sections 4(i) and 309 of the Communications Act of 1934, as amended, 47 U.S.C. §§154(i), 309 that the licensing staff of the Broadband Division, Wireless Telecommunications Bureau SHALL PROCESS File Nos. 0008274506 and 0008274507 in accordance with this *Memorandum Opinion and Order* and the Commission's Rules.
- 21. IT IS FURTHER ORDERED, pursuant to Sections 4(i) and 309 of the Communications Act of 1934, as amended, 47 U.S.C. § 154(i), 309 that the following conditions SHALL BE IMPOSED on each authorization issued to Northern Michigan University as a result of the applications it has filed:

The Geographic Service Area of this station shall not include any area within the GSA of any previously licensed co-channel EBS station.

Operation within 160 kilometers of the Canadian border is prohibited without prior compliance, to the extent applicable, with the coordination requirements of the Interim Arrangement Concerning the Use of the Frequency Bands 2150–2162 MHz and 2500–2690 MHz by MCS and MDS Stations Near the Canada/United States of America Border or any subsequent agreement with Canada.

⁶⁰ Interim Arrangement.

⁵⁹ 47 CFR § 27.14(o).

⁶¹ See 47 CFR § 27.1209(b)(1)(i).

^{62 47} CFR § 1.913(b).

The Board of Trustees of Northern Michigan University shall demonstrate substantial service within two years after the grant of their applications.

22. This action is taken under delegated authority pursuant to Sections 0.131 and 0.331 of the Commission's Rules, 47 C.F.R. §§ 0.131, 0.331.

FEDERAL COMMUNICATIONS COMMISSION

Donald K. Stockdale, Jr. Chief, Wireless Telecommunications Bureau